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FILE 'HOME' ENTERED AT 10:06:57 ON 17 APR 2003

=> fil .bec
COST IN U.S. DOLLARS                                    SINCE FILE      TOTAL
                                                           ENTRY    SESSION
FULL ESTIMATED COST                                         0.21       0.21

FILES 'MEDLINE, SCISEARCH, LIFESCI, BIOTECHDS, BIOSIS, EMBASE, HCAPLUS, NTIS,
       ESBIOBASE, BIOTECHNO, WPIDS' ENTERED AT 10:07:17 ON 17 APR 2003
ALL COPYRIGHTS AND RESTRICTIONS APPLY.  SEE HELP USAGETERMS FOR DETAILS.

11 FILES IN THE FILE LIST

=> s bacillus thuringiensis
FILE 'MEDLINE'
         42670 BACILLUS
          2835 THURINGIENSIS
L1        2744 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

FILE 'SCISEARCH'
         41909 BACILLUS
          5436 THURINGIENSIS
L2        5133 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

FILE 'LIFESCI'
         22712 "BACILLUS"
          3831 "THURINGIENSIS"
L3        3765 BACILLUS THURINGIENSIS
                 ("BACILLUS"(W)"THURINGIENSIS")

FILE 'BIOTECHDS'
         15194 BACILLUS
          2125 THURINGIENSIS
L4        2116 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

FILE 'BIOSIS'
         61920 BACILLUS
          8478 THURINGIENSIS
L5        8407 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

FILE 'EMBASE'
         31370 "BACILLUS"
          2153 "THURINGIENSIS"
L6        2104 BACILLUS THURINGIENSIS
                 ("BACILLUS"(W)"THURINGIENSIS")

FILE 'HCAPLUS'
         73495 BACILLUS
          5766 THURINGIENSIS
L7        5651 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

FILE 'NTIS'
          1604 BACILLUS
           183 THURINGIENSIS
L8         168 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)
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FILE 'ESBIOBASE'
         11855 BACILLUS
          1621 THURINGIENSIS
L9        1586 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

FILE 'BIOTECHNO'
         18734 BACILLUS
          2115 THURINGIENSIS
L10       2083 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

FILE 'WPIDS'
         10449 BACILLUS
           940 THURINGIENSIS
L11        850 BACILLUS THURINGIENSIS
                 (BACILLUS(W)THURINGIENSIS)

TOTAL FOR ALL FILES
L12      34607 BACILLUS THURINGIENSIS

=> s (truncat? or digest? or fragment?)(4a)(endotoxin# or toxin# or crystal
protein#)
FILE 'MEDLINE'
        156239 TRUNCAT?
        100498 DIGEST?
        240901 FRAGMENT?
         26790 ENDOTOXIN#
         68859 TOXIN#
         34560 CRYSTAL
       1482512 PROTEIN#
          1133 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L13       1235 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'SCISEARCH'
         36847 TRUNCAT?
         81255 DIGEST?
        195324 FRAGMENT?
         26507 ENDOTOXIN#
         60934 TOXIN#
        339117 CRYSTAL
       1174469 PROTEIN#
           983 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L14        978 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'LIFESCI'
         13615 TRUNCAT?
         32771 DIGEST?
         81109 FRAGMENT?
          6749 ENDOTOXIN#
         30290 TOXIN#
         13034 "CRYSTAL"
        453579 PROTEIN#
           437 CRYSTAL PROTEIN#
                 ("CRYSTAL"(W)PROTEIN#)
L15        677 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'BIOTECHDS'
          2300 TRUNCAT?
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         14359 DIGEST?
         37298 FRAGMENT?
           938 ENDOTOXIN#
          4556 TOXIN#
          2802 CRYSTAL
        104599 PROTEIN#
          1523 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L16        384 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'BIOSIS'
         31267 TRUNCAT?
        528112 DIGEST?
        208364 FRAGMENT?
         24201 ENDOTOXIN#
        141680 TOXIN#
         41559 CRYSTAL
       1484988 PROTEIN#
           770 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L17       1582 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'EMBASE'
         21836 TRUNCAT?
        137895 DIGEST?
        153998 FRAGMENT?
         22867 ENDOTOXIN#
         60507 TOXIN#
         42682 "CRYSTAL"
       1159240 PROTEIN#
           297 CRYSTAL PROTEIN#
                 ("CRYSTAL"(W)PROTEIN#)
L18        995 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'HCAPLUS'
         36214 TRUNCAT?
        206466 DIGEST?
        333770 FRAGMENT?
         25101 ENDOTOXIN#
         99267 TOXIN#
       1019344 CRYSTAL
       1734655 PROTEIN#
          1347 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L19       1847 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'NTIS'
          3359 TRUNCAT?
          5873 DIGEST?
         13037 FRAGMENT?
           721 ENDOTOXIN#
          3269 TOXIN#
         41690 CRYSTAL
         16838 PROTEIN#
             7 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L20         26 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'ESBIOBASE'
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         15590 TRUNCAT?
         37191 DIGEST?
         65046 FRAGMENT?
          5445 ENDOTOXIN#
         24131 TOXIN#
         21648 CRYSTAL
        516142 PROTEIN#
           200 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L21        419 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'BIOTECHNO'
         17164 TRUNCAT?
         38864 DIGEST?
         98648 FRAGMENT?
          5261 ENDOTOXIN#
         23338 TOXIN#
         13963 CRYSTAL
        594891 PROTEIN#
           295 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L22        618 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

FILE 'WPIDS'
         24628 TRUNCAT?
         19822 DIGEST?
         53094 FRAGMENT?
          2101 ENDOTOXIN#
          6431 TOXIN#
        233215 CRYSTAL
        108865 PROTEIN#
           175 CRYSTAL PROTEIN#
                 (CRYSTAL(W)PROTEIN#)
L23        315 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

TOTAL FOR ALL FILES
L24       9076 (TRUNCAT? OR DIGEST? OR FRAGMENT?)(4A)(ENDOTOXIN# OR TOXIN# OR
               CRYSTAL PROTEIN#)

=> s l12 and l24
FILE 'MEDLINE'
L25         54 L1 AND L13

FILE 'SCISEARCH'
L26         69 L2 AND L14

FILE 'LIFESCI'
L27         78 L3 AND L15

FILE 'BIOTECHDS'
L28        112 L4 AND L16

FILE 'BIOSIS'
L29        102 L5 AND L17

FILE 'EMBASE'
L30         45 L6 AND L18

FILE 'HCAPLUS'
L31        176 L7 AND L19
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FILE 'NTIS'
L32          0 L8 AND L20

FILE 'ESBIOBASE'
L33         29 L9 AND L21

FILE 'BIOTECHNO'
L34         47 L10 AND L22

FILE 'WPIDS'
L35         33 L11 AND L23

TOTAL FOR ALL FILES
L36        745 L12 AND L24

=> s l12(15a)l24
FILE 'MEDLINE'
L37         23 L1 (15A)L13

FILE 'SCISEARCH'
L38         32 L2 (15A)L14

FILE 'LIFESCI'
L39         35 L3 (15A)L15

FILE 'BIOTECHDS'
L40         63 L4 (15A)L16

FILE 'BIOSIS'
L41         40 L5 (15A)L17

FILE 'EMBASE'
L42         17 L6 (15A)L18

FILE 'HCAPLUS'
L43         87 L7 (15A)L19

FILE 'NTIS'
L44          0 L8 (15A)L20

FILE 'ESBIOBASE'
L45         10 L9 (15A)L21

FILE 'BIOTECHNO'
L46         20 L10(15A)L22

FILE 'WPIDS'
L47         18 L11(15A)L23

TOTAL FOR ALL FILES
L48        345 L12(15A) L24

=> s cryvi? or cry6? or 86a1 or ps86a1
FILE 'MEDLINE'
             0 CRYVI?
             2 CRY6?
             0 86A1
             0 PS86A1
L49          2 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'SCISEARCH'
             0 CRYVI?
             3 CRY6?
             1 86A1
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             0 PS86A1
L50          4 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'LIFESCI'
             0 CRYVI?
             3 CRY6?
             1 86A1
             3 PS86A1
L51          7 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'BIOTECHDS'
             2 CRYVI?
             2 CRY6?
             4 86A1
             6 PS86A1
L52         12 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'BIOSIS'
             0 CRYVI?
             8 CRY6?
             5 86A1
             0 PS86A1
L53         13 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'EMBASE'
             0 CRYVI?
             1 CRY6?
             0 86A1
             0 PS86A1
L54          1 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'HCAPLUS'
             5 CRYVI?
            11 CRY6?
             4 86A1
             3 PS86A1
L55         21 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'NTIS'
             0 CRYVI?
             0 CRY6?
             0 86A1
             0 PS86A1
L56          0 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'ESBIOBASE'
             0 CRYVI?
             0 CRY6?
             0 86A1
             0 PS86A1
L57          0 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'BIOTECHNO'
             0 CRYVI?
             1 CRY6?
             0 86A1
             0 PS86A1
L58          1 CRYVI? OR CRY6? OR 86A1 OR PS86A1

FILE 'WPIDS'
             1 CRYVI?
             5 CRY6?
             3 86A1
             6 PS86A1
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L59          13 CRYVI? OR CRY6? OR 86A1 OR PS86A1

TOTAL FOR ALL FILES
L60          74 CRYVI? OR CRY6? OR 86A1 OR PS86A1

=> s (148 or 160) not 1999-2003/py
FILE 'MEDLINE'
       2100383 1999-2003/PY
L61          22 (L37 OR L49) NOT 1999-2003/PY

FILE 'SCISEARCH'
       4092740 1999-2003/PY
L62          28 (L38 OR L50) NOT 1999-2003/PY

FILE 'LIFESCI'
        420770 1999-2003/PY
L63          33 (L39 OR L51) NOT 1999-2003/PY

FILE 'BIOTECHDS'
         70340 1999-2003/PY
L64          64 (L40 OR L52) NOT 1999-2003/PY

FILE 'BIOSIS'
       2262882 1999-2003/PY
L65          37 (L41 OR L53) NOT 1999-2003/PY

FILE 'EMBASE'
       1846344 1999-2003/PY
L66          14 (L42 OR L54) NOT 1999-2003/PY

FILE 'HCAPLUS'
       3953396 1999-2003/PY
L67          62 (L43 OR L55) NOT 1999-2003/PY

FILE 'NTIS'
         73806 1999-2003/PY
L68           0 (L44 OR L56) NOT 1999-2003/PY

FILE 'ESBIOBASE'
       1191586 1999-2003/PY
L69           5 (L45 OR L57) NOT 1999-2003/PY

FILE 'BIOTECHNO'
        494542 1999-2003/PY
L70          15 (L46 OR L58) NOT 1999-2003/PY

FILE 'WPIDS'
       3477481 1999-2003/PY
L71          11 (L47 OR L59) NOT 1999-2003/PY

TOTAL FOR ALL FILES
L72         291 (L48 OR L60) NOT 1999-2003/PY

=> dup rem l72
PROCESSING COMPLETED FOR L72
L73          154 DUP REM L72 (137 DUPLICATES REMOVED)

=> d tot

L73  ANSWER 1 OF 154  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI   Bacillus thuringiensis alpha-endotoxin
     fragments.
SO   Official Gazette of the United States Patent and Trademark Office Patents,
     (Jan. 20, 1998) Vol. 1206, No. 3, pp. 2149.
```

ISSN: 0098-1133.
AU Adang, M. J.
AN 2002:101642 BIOSIS

L73 ANSWER 2 OF 154 WPIDS (C) 2003 THOMSON DERWENT
TI Chimeric gene containing **Bacillus thuringiensis** DNA - encoding insecticidal **fragment** of **crystal protein**.
PI US 5767372 A 19980616 (199831)* 112p A01H004-00
IN DE GREVE, H M J; HOFTE, H F P; LEEMANS, J J A; SALGADO, M B L F; VAECK, M A; VAN MONTAGU, M C E; ZABEAU, M F O

L73 ANSWER 3 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R) DUPLICATE 1
TI Effects of crystalline forms on the deformation behaviour of nylon-6
SO POLYMER, (SEP 1998) Vol. 39, No. 19, pp. 4593-4598.
Publisher: ELSEVIER SCI LTD, THE BOULEVARD, LANGFORD LANE, KIDLINGTON, OXFORD OX5 1GB, OXON, ENGLAND.
ISSN: 0032-3861.
AU Ito M (Reprint); Mizuochi K; Kanamoto T
AN 1998:548552 SCISEARCH

L73 ANSWER 4 OF 154 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Muscarinic acetylcholine receptors induce h-cyr61 expression.
SO Society for Neuroscience Abstracts, (1998) Vol. 24, No. 1-2, pp. 1246.
Meeting Info.: 28th Annual Meeting of the Society for Neuroscience, Part 2 Los Angeles, California, USA November 7-12, 1998
ISSN: 0190-5295.
AU Albrecht, D.; V D Kammer, H.; Mayhaus, M.; Klaudiny, J.; Langer, U.; Schweizer, M.; Nitsch, R. M.
AN 1999:57421 BIOSIS

L73 ANSWER 5 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R) DUPLICATE 2
TI Short communication: A fusion gene coding for two different delta-endotoxins of Bacillus thuringiensis toxic to Plutella xylostella and useful for resistance management
SO WORLD JOURNAL OF MICROBIOLOGY & BIOTECHNOLOGY, (JUL 1998) Vol. 14, No. 4, pp. 599-601.
Publisher: KLUWER ACADEMIC PUBL, SPUIBOULEVARD 50, PO BOX 17, 3300 AA DORDRECHT, NETHERLANDS.
ISSN: 0959-3993.
AU Mandaokar A; Chakrabarti S K; Rao N G V; Kumar P A; Sharma R P (Reprint)
AN 1998:815327 SCISEARCH

L73 ANSWER 6 OF 154 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Proteolysis of Bacillus thuringiensis subspecies kurstaki endotoxin with midgut proteases of some important lepidopterous species.
SO Indian Journal of Experimental Biology, (June, 1998) Vol. 36, No. 6, pp. 593-598.
ISSN: 0019-5189.
AU Meenakshisundaram, K. S.; Gujar, G. T. (1)
AN 1998:317143 BIOSIS

L73 ANSWER 7 OF 154 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI At the cutting edge: How many insulin-like growth factor binding proteins.
SO Molecular and Cellular Endocrinology, (April 30, 1998) Vol. 139, No. 1-2, pp. 1-6.
ISSN: 0303-7207.
AU Collet, Chris (1); Candy, Judith
AN 1998:360387 BIOSIS

L73 ANSWER 8 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI **Bacillus thuringiensis** alpha **-endotoxin fragments**
SO (19980120) . US Patent 5710020; US Class: 435/69.1; 435/251.31;

435/252.33; 536/23.71..
AU Adang, M.J.
AN 1999:38933 LIFESCI

L73 ANSWER 9 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Transformation vectors allowing expression of foreign polypeptide endotoxins from Bacillus thuringiensis in plants
SO (19980616) . US Patent 5767372; US Class: 800/205; 536/23.71; 435/320.1; 435/419..
AU De Greve, H.M.J.; Salgado, M.B.L.F.; Van Montagu, M.C.E.; Vaeck, M.A.; Zabeau, M.F.O.; Leemans, J.J.A.; Hofte, H.F.P.
AN 1999:38928 LIFESCI

L73 ANSWER 10 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Transformation vectors allowing expression of foreign polypeptide endotoxins in plants
SO (19981201) . US Patent: 5843898; US CLASS: 514/12; 435/69.1..
AU De Greve, H.A.O.; Salgado, M.E.E.E.; Van Montagu, M.H.R.; Vaeck, M.L.; Zabeau, M.L.S.; Leemans, J.O.U.; Hofte, H.R.A.
AN 2000:42128 LIFESCI

L73 ANSWER 11 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Detecting viable Cryptosporidium oocysts in a sample; monoclonal antibody production by hybridoma culture for use in Cryptosporidium oocyst determination in the environment
AU Vesey G; Williams K; Veal D; Champion A; Pererva N
AN 1997-05695 BIOTECHDS
PI WO 9708204 6 Mar 1997

L73 ANSWER 12 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Transgenic cotton plants toxic to Manduca sexta or Heliothis zea; transgenic plant construction with insect resistance by expression of **truncated crystal protein** gene from **Bacillus thuringiensis**
AU Barton K A; Umbeck P F
AN 1997-05599 BIOTECHDS
PI US 5608142 4 Mar 1997

L73 ANSWER 13 OF 154 WPIDS (C) 2003 THOMSON DERWENT
TI Transgenic cotton plants toxic to Manduca sexta or Heliothis zea - contg. DNA encoding **truncated Bacillus thuringiensis** delta-**endotoxin** protein.
PI US 5608142 A 19970304 (199715)* EN 20p A01H004-00
IN BARTON, K A; UMBECK, P F

L73 ANSWER 14 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 3
TI Engineering genetic resistance against insects in Japanese persimmon using the cryIA(c) gene of Bacillus thuringiensis
SO JOURNAL OF THE AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE, (NOV 1997) Vol. 122, No. 6, pp. 764-771.
Publisher: AMER SOC HORTICULTURAL SCIENCE, 701 NORTH SAINT ASAPH STREET, ALEXANDRIA, VA 22314-1998.
ISSN: 0003-1062.
AU Tao R (Reprint); Dandekar A M; Uratsu S L; Vail P V; Tebbets J S
AN 97:842446 SCISEARCH

L73 ANSWER 15 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Engineering genetic resistance against insects in Japanese persimmon using the cryIA(c) gene of Bacillus thuringiensis; insect resistance trait introduction into Diospyros kaki transgenic plant
SO J.Am.Soc.Hortic.Sci.; (1997) 122, 6, 764-71
CODEN: JOSHB5 ISSN: 0003-1062
AU Tao R; Dandekar A M; Uratsu S L; Vail P V; Tebbets J S

AN 1998-00607 BIOTECHDS

L73 ANSWER 16 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI A Bacillus thuringiensis .delta.-endotoxin induces programmed cell death in mosquito larvae
SO Cell Death and Differentiation (1997), 4(7), 560-569
CODEN: CDDIEK; ISSN: 1350-9047
AU Smouse, David; Nishiura, James
AN 1997:804327 HCAPLUS
DN 128:58492

L73 ANSWER 17 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 4
TI Enhanced resistance to two stem borers in an aromatic rice containing a synthetic cryIA(b) gene
SO MOLECULAR BREEDING, (12 SEP 1997) Vol. 3, No. 5, pp. 401-414.
Publisher: KLUWER ACADEMIC PUBL, SPUIBOULEVARD 50, PO BOX 17, 3300 AA DORDRECHT, NETHERLANDS.
ISSN: 1380-3743.
AU Ghareyazie B; Alinia F; Menguito C A; Rubia L G; dePalma J M; Liwanag E A; Cohen M B; Khush G S; Bennett J (Reprint)
AN 97:787044 SCISEARCH

L73 ANSWER 18 OF 154 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 5
TI Methylation modification of toxin gene of Bacillus thuringiensis in wheat.
SO Acta Genetica Sinica, (1997) Vol. 24, No. 3, pp. 255-262.
ISSN: 0379-4172.
AU Guo, Liang; Wen, Yuxiang (1); Liang, Yumei; Zhou, Wenjuan; Hu, Han; Su, Hong; Wei, Rongxuan
AN 1998:6147 BIOSIS

L73 ANSWER 19 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 6
TI The cryic gene from Bacillus thuringiensis provides protection against Spodoptera littoralis in young transgenic plants
SO PLANT SCIENCE, (12 SEP 1997) Vol. 127, No. 2, pp. 179-190.
Publisher: ELSEVIER SCI IRELAND LTD, CUSTOMER RELATIONS MANAGER, BAY 15, SHANNON INDUSTRIAL ESTATE CO, CLARE, IRELAND.
ISSN: 0168-9452.
AU Mazier M; Chaufaux J; Sanchis V; Lereclus D; Giband M; Tourneur J (Reprint)
AN 97:624955 SCISEARCH

L73 ANSWER 20 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI The cryic gene from Bacillus thuringiensis provides protection against Spodoptera littoralis in young transgenic plants;
crop improvement by crystal protein gene expression in tobacco transgenic plant
SO Plant Sci.; (1997) 127, 2, 179-90
CODEN: 7615B ISSN: 0168-9452
AU Mazier M; Chaufaux J; Sanchis V; Lereclus D; Giband M; *Tourneur J
AN 1997-12269 BIOTECHDS

L73 ANSWER 21 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Phage display of Bacillus thuringiensis CryIA(a) insecticidal toxin;
crystal protein fragment gene cloning and expression in Escherichia coli, for use as an insecticide
SO FEBS Lett.; (1997) 411, 1, 27-31
CODEN: FEBLAL ISSN: 0014-5793
AU Marzari R; Edomi P; Bhatnagar R K; Ahmad S; Selvapandiyan A; Bradbury A
AN 1997-10429 BIOTECHDS

L73 ANSWER 22 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Mutant Bacillus strains producing factor;
Bacillus thuringiensis crystal protein synergist production by B.

thuringiensis mutagenesis and mutant fermentation
AU Outtrup H; Starnes R L; Lidster W D; Manker D; MacIntosh S C
AN 1997-02181 BIOTECHDS
PI WO 9638539 5 Dec 1996

L73 ANSWER 23 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 7
TI CONSTRUCTION OF POLYHEDRIN-POSITIVE RECOMBINANT VIRUS WITH EXPRESSION OF **TRUNCATED** DELTA-**ENDOTOXIN** FROM **BACILLUS-THURINGIENSIS** IN INSECT-CELL
SO CHINESE SCIENCE BULLETIN, (APR 1996) Vol. 41, No. 7, pp. 597-603. ISSN: 1001-6538.
AU WANG F S (Reprint); HUANG Y X; OI Y P; LIU Z Y; YANG Y Z
AN 96:359713 SCISEARCH

L73 ANSWER 24 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Poplar (Populus nigra L.) plants transformed with a Bacillus thuringiensis toxin gene: insecticidal activity and genomic analysis; Agrobacterium tumefaciens-mediated poplar leaf culture transformation with crystal protein gene and transgenic plant propagation for insect resistance
SO Transgenic Res.; (1996) 5, 5, 289-301
CODEN: 8915P
AU Wang G; Castiglione S; Chen Y; Li L; Han Y; Tian Y; Gabriel D W; Han Y; Mang K; *Sala F
AN 1996-13554 BIOTECHDS

L73 ANSWER 25 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Influence of the 20 kDa protein from Bacillus thuringiensis ssp. israelensis on the rate of production of truncated Cry1C proteins; truncated recombinant crystal protein production, for application as an insecticide
SO FEMS Microbiol.Lett.; (1996) 141, 2-3, 261-64
CODEN: FMLED7 ISSN: 0378-1097
AU Rang C; Bes M; Lullien-Pellerin V; Wu D; Federici B A; *Frutos R
AN 1996-11223 BIOTECHDS

L73 ANSWER 26 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Isolation and characterization of xnov, a Xenopus laevis ortholog of the chicken nov gene
SO Gene (1996), 171(2), 243-248
CODEN: GENED6; ISSN: 0378-1119
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DN 125:78065

L73 ANSWER 27 OF 154 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: JIVPAZ; ISSN: 0022-2011
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DN 126:43937

L73 ANSWER 28 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
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SO Bio/Technology; (1996) 14, 2, 171-76
CODEN: BTCHDA ISSN: 0733-222X
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L73 ANSWER 29 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 8
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AN 96:703671 SCISEARCH

L73 ANSWER 30 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
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SO Plant Physiol.; (1996) 111, 2, Suppl., 40
CODEN: PLPHAY ISSN: 0032-0889
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L73 ANSWER 31 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 9
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ISSN: 0006-8063.
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AN 96:121359 SCISEARCH

L73 ANSWER 32 OF 154 HCAPLUS COPYRIGHT 2003 ACS
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SO Molecular & General Genetics (1996), 253(1-2), 11-19
CODEN: MGGEAE; ISSN: 0026-8925
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DN 126:55669

L73 ANSWER 33 OF 154 LIFESCI COPYRIGHT 2003 CSA
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SO (1996) . US Patent 5545565; US Cl. 435/320.1 435/69.1 435/172.3 435/240.4 514/12.
AN 97:95363 LIFESCI

L73 ANSWER 34 OF 154 LIFESCI COPYRIGHT 2003 CSA
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SO (19961126) . US Patent 5578702; US Cl. 530/350 435/69.1 435/240.4 536/23.71 800/205.
AN 1998:21912 LIFESCI

L73 ANSWER 35 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
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L73 ANSWER 36 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
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crystal protein overproduction by integration via homologous recombination and marker rescue, for use in biological control agent strain improvement
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AN 1995-04013 BIOTECHDS
PI WO 9502695 26 Jan 1995

L73 ANSWER 37 OF 154 MEDLINE DUPLICATE 10
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Estudio comparativo de tres sistemas de expresion heterologa para la obtencion de delta-endotoxinas recombinantes de Bacillus thuringiensis en Escherichia coli.
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L73 ANSWER 38 OF 154 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: CUMIDD; ISSN: 0343-8651
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DN 123:104083

L73 ANSWER 39 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
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Bacillus thuringiensis crystal protein gene transfer by microprojectile particle bombardment for insect resistance (conference paper)
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CODEN: EUPHAA ISSN: 0014-2336
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AN 1996-04547 BIOTECHDS

L73 ANSWER 40 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Interaction of the insecticidal crystal protein CryIA from Bacillus thuringiensis with amino acid transport into brush border membranes from Bombyx mori larval midgut
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CODEN: JIVPAZ; ISSN: 0022-2011
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AN 1995:460760 HCAPLUS
DN 122:261534

L73 ANSWER 41 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Cloning and characterization of a Bacillus thuringiensis homolog of the spoIIID gene from Bacillus subtilis;
crystal protein promoter gene cloning and characterization, for application as an insecticide
SO Gene; (1995) 154, 1, 23-29

CODEN: GENED6 ISSN: 0378-1119
AU Yoshisue H; Ihara K; Nishimoto T; Sakai H; *Komano T
AN 1995-05263 BIOTECHDS

L73 ANSWER 42 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Construction of RNA probe vector of Bacillus thuringiensis CryI genes
SO Huazhong Nongye Daxue Xuebao (1995), 14(1), 7-11
CODEN: HNDXEK; ISSN: 1000-2421
AU Hong Yuzhi; Liu Ziduo; Tang Jiangwu; Yu Ziniu
AN 1995:637540 HCAPLUS
DN 123:161932

L73 ANSWER 43 OF 154 LIFESCI COPYRIGHT 2003 CSA
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SO (1995) . US Patent 5424410; US Cl. 536/23.71 424/93.4 424/93.46 424/93.461 435/172.3 435/242 435/252.3 435/252.5 435/252.8 435/320.1 435/832 536/22.1 536/23.1 536/23.2 536/23.7.
AN 96:106712 LIFESCI

L73 ANSWER 44 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Bacillus thuringiensis for controlling pests in the family Aphididae
SO (1995) . US Patent 5468636; US Cl. 435/252.3 424/93.461 435/252.31 435/252.33 536/23.71.
AN 97:36993 LIFESCI

L73 ANSWER 45 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Development of combinatorial genetic constructions containing truncated versions of crylA(B) and crylB genes from Bacillus thuringiensis for further production of autopesticide cabbage plants;
Agrobacterium tumefaciens-mediated **Bacillus thuringiensis truncated crystal protein** gene transfer for transgenic plant construction and insect resistance (conference paper)
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CODEN: 9999M
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L73 ANSWER 46 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Method for controlling wireworms;
Bacillus thuringiensis crystal protein expression in transgenic plant cell for application in wireworm disease-resistance
AU Kim L; Payne J
AN 1995-00531 BIOTECHDS
PI WO 9423036 13 Oct 1994

L73 ANSWER 47 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 12
TI REMOVAL OF ADSORBED **TOXIN FRAGMENTS** THAT MODIFY **BACILLUS-THURINGIENSIS** CRYIC DELTA-ENDOTOXIN IODINATION AND BINDING BY SODIUM DODECYL-SULFATE TREATMENT AND RENATURATION
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ISSN: 0099-2240.
AU LUO K; ADANG M J (Reprint)
AN 94:484416 SCISEARCH

L73 ANSWER 48 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Removal of adsorbed **toxin fragments** that modify **Bacillus thuringiensis** CryIC delta-endotoxin iodination and binding by sodium dodecyl sulfate treatment and renaturation;
crystal protein purification and insecticide activity
SO Appl.Environ.Microbiol.; (1994) 60, 8, 2905-10

CODEN: AEMIDF
AU Luo K; *Adang M J
AN 1994-11117 BIOTECHDS

L73 ANSWER 49 OF 154 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 13
TI Insect-resistant rice generated by introduction of a modified delta -endotoxin gene of Bacillus thuringiensis
SO BIOCONTROL SCI. TECHNOL., (1994) vol. 4, no. 4, p. 485.
ISSN: 0958-3157.
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AN 96:89137 LIFESCI

L73 ANSWER 50 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Resistance to codling moth: expression of synthetic cryIA(c) genes in transgenic walnut embryos;
transgenic plant construction via Bacillus thuringiensis crystal protein cryIA(c) artificial gene expression, potential Cydia pomonella insect resistance (conference abstract)
SO Hortscience; (1994) 29, 5, 454
CODEN: HJHSAR
AU Dandekar A M; McGranahan G H; Vail P V; Uratsu S L; Leslie C; Tebbets J J
AN 1994-09851 BIOTECHDS

L73 ANSWER 51 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Insecticidal activity of the CryIA(a) and CryIB delta-endotoxin of Bacillus thuringiensis was retained after the coding region of the gene was truncated and expressed in Escherichia coli
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CODEN: NISZAQ; ISSN: 0037-2455
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AN 1994:648605 HCAPLUS
DN 121:248605

L73 ANSWER 52 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 14
TI LOW-LEVELS OF EXPRESSION OF WILD-TYPE BACILLUS-THURINGIENSIS VAR KURSTAKI CRYIA(C) SEQUENCES IN TRANSGENIC WALNUT SOMATIC EMBRYOS
SO PLANT SCIENCE, (1994) Vol. 96, No. 1-2, pp. 151-162.
ISSN: 0168-9452.
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AN 94:208245 SCISEARCH

L73 ANSWER 53 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Recovery and evaluation of soybean plants transgenic for a Bacillus thuringiensis var. kurstaki insecticidal gene;
immature seed cotyledon culture, somatic embryogenesis and transformation with crystal protein gene by microprojectile particle bombardment; transgenic plant with insect resistance
SO In Vitro Plant; (1994) 30, 3, 144-49
CODEN: 4588P
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L73 ANSWER 54 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Promoters and their use in the expression of agronomically important genes for genetic engineering of indica rice;
Bacillus thuringiensis cryIA(c) crystal protein gene expression for potential insect resistance (conference abstract)
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CODEN: JCEBD5
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AN 1994-13645 BIOTECHDS

L73 ANSWER 55 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Expression of Bacillus thuringiensis var. kurstaki cryIA(c) sequences in transgenic somatic walnut embryos;
recombinant crystal protein gene expression in walnut transgenic plant; potential Cydia pomonella insect resistance (conference abstract)
SO J.Cell.Biochem.; (1994) Suppl.18A, 86
CODEN: JCEBD5
AU Dandekar A M; McGranahan G H; Vail P V; Uratsu S L; Leslie C
AN 1994-13573 BIOTECHDS

L73 ANSWER 56 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Novel Bacillus thuringiensis isolates active against biting louse;
recombinant crystal protein production; DNA sequence; sheep biting louse Damilinia ovis biological control agent
AN 1993-12192 BIOTECHDS
PI WO 9314641 5 Aug 1993

L73 ANSWER 57 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Lactococcus host organism;
phage T7 RNA-polymerase expression in Lactococcus lactis; application in e.g. tetanus **toxin** C **fragment**, HIV virus V3 loop antigen, **Bacillus thuringiensis** crystal protein production
AN 1993-13313 BIOTECHDS
PI WO 9317117 2 Sep 1993

L73 ANSWER 58 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Method for controlling acarid pests;
Bacillus thuringiensis biological control agent, recombinant crystal protein delta-endotoxin acaricide and transgenic plant production with insect resistance
AN 1994-00909 BIOTECHDS
PI US 5262158 16 Nov 1993

L73 ANSWER 59 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Transformed insect resistant plant cell;
transgenic plant containing chimeric gene encoding a **Bacillus thuringiensis truncated crystal protein** and exhibiting insect resistance
AN 1993-15221 BIOTECHDS
PI US 5254799 19 Oct 1993

L73 ANSWER 60 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Plasmid rAUS135a vector;
Bacillus thuringiensis var. kurstaki crystal protein gene cloning and expression by plasmid mobilization in Methylobacillus flagellatum for use as an insect biological control agent
AN 1994-06269 BIOTECHDS
PI SU 1628527 30 Oct 1993

L73 ANSWER 61 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Control of aphid pest;
Bacillus thuringiensis biological control agent, recombinant crystal protein insecticide and transgenic plant production with insect resistance
AN 1994-00910 BIOTECHDS
PI US 5262159 16 Nov 1993

L73 ANSWER 62 OF 154 MEDLINE DUPLICATE 16
TI Insect resistant rice generated by introduction of a modified delta-endotoxin gene of Bacillus thuringiensis.
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Journal code: 8309273. ISSN: 0733-222X.
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L73 ANSWER 63 OF 154 HCAPLUS COPYRIGHT 2003 ACS
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SO Biochemical and Biophysical Research Communications (1993), 196(2), 921-6
CODEN: BBRCA9; ISSN: 0006-291X
AU Walters, Frederick S.; Slatin, Stephen L.; Kulesza, Caroline A.; English, Leigh H.
AN 1993:664450 HCAPLUS
DN 119:264450

L73 ANSWER 64 OF 154 MEDLINE DUPLICATE 17
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Journal code: 9207282. ISSN: 0965-1748.
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AN 93250868 MEDLINE

L73 ANSWER 65 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Field performance of elite transgenic maize plants expressing an insecticidal protein derived from Bacillus thuringiensis;
crystal protein expression in transgenic maize as a means of improving insect resistance to European corn borer (Ostrinia nubilalis)
SO Bio/Technology; (1993) 11, 2, 194-200
CODEN: BTCHDA
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AN 1993-02753 BIOTECHDS

L73 ANSWER 66 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R) DUPLICATE 18
TI GROWTH AND SURVIVAL OF HELIOTHIS-VIRESCENS (LEPIDOPTERA, NOCTUIDAE) ON TRANSGENIC COTTON CONTAINING A **TRUNCATED** FORM OF THE DELTA **ENDOTOXIN** GENE FROM **BACILLUS-THURINGIENSIS**
SO JOURNAL OF ECONOMIC ENTOMOLOGY, (FEB 1993) Vol. 86, No. 1, pp. 181-185.
ISSN: 0022-0493.
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AN 93:87279 SCISEARCH

L73 ANSWER 67 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Expression of endotoxin gene from Bacillus thuringiensis with insect baculovirus transfer vector in Escherichia coli
SO Shengwu Gongcheng Xuebao (1993), 9(2), 181-3
CODEN: SGXUED; ISSN: 1000-3061
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AN 1993:510336 HCAPLUS
DN 119:110336

L73 ANSWER 68 OF 154 MEDLINE DUPLICATE 19
TI Insect-resistant chrysanthemum calluses by introduction of a Bacillus thuringiensis crystal protein gene.
SO TRANSGENIC RESEARCH, (1993 May) 2 (3) 170-80.
Journal code: 9209120. ISSN: 0962-8819.
AU van Wordragen M F; Honee G; Dons H J
AN 93357803 MEDLINE

L73 ANSWER 69 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Transgenic cabbage plants with insect tolerance;
transgenic plant construction via **Bacillus thuringiensis truncated** cryIA(c) **crystal protein** gene expression; application in insect resistance

(conference paper)
SO Curr.Plant Sci.Biotechnol.Agric.; (1993) 156-59
CODEN: 9999T
AU Bai Y Y; Mao H Z; Cao X L; Tang T; Wu D; Chen D D
AN 1993-14536 BIOTECHDS

L73 ANSWER 70 OF 154 MEDLINE DUPLICATE 20
TI Expression of full-length and **truncated** forms of **crystal protein** genes from **Bacillus thuringiensis** subsp. kurstaki in a baculovirus and pathogenicity of the recombinant viruses.
SO JOURNAL OF INVERTEBRATE PATHOLOGY, (1993 Sep) 62 (2) 121-30.
Journal code: 0014067. ISSN: 0022-2011.
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AN 94044868 MEDLINE

L73 ANSWER 71 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Use of Bacillus thuringiensis isolates for controlling pests in the family Aphididae
SO (1993) . US Patent 5,262,159.
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AN 94:31814 LIFESCI

L73 ANSWER 72 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Characterization and expression analysis of the growth factor-inducible immediate-early gene cyr61
SO (1992) 126 pp. Avail.: Univ. Microfilms Int., Order No. DA9238021
From: Diss. Abstr. Int. B 1993, 53(8), 3911
AU O'Brien, Timothy Paul
AN 1994:126810 HCAPLUS
DN 120:126810

L73 ANSWER 73 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI New Bacillus thuringiensis isolate and toxin;
new biological control agent and recombinant crystal protein preparation and gene expression in transgenic plant for disease-resistance
AN 1993-01529 BIOTECHDS
PI WO 9219106 12 Nov 1992

L73 ANSWER 74 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Method for biological control of maize rootworm larvae and alfalfa weevil;
using new Bacillus thuringiensis biological control agent expressing crystal protein
AN 1992-12520 BIOTECHDS
PI EP 500311 26 Aug 1992

L73 ANSWER 75 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Bacillus thuringiensis crystal protein gene toxin segment;
gene cloning and expression for insecticide production or construction of transgenic plant with insect resistance
AN 1992-11919 BIOTECHDS
PI AU 9062083 18 Jun 1992

L73 ANSWER 76 OF 154 WPIDS (C) 2003 THOMSON DERWENT
TI New DNA **fragment** encoding **toxin** portion of **Bacillus thuringiensis** crystal protein peptide - comprises toxin encoding DNA codon(s) encoding peptide having substantial amino acid homology with the peptide encoded by bacillus crystal protein gene.
PI AU 9062083 A 19920618 (199232)* 56p C12N015-32

L73 ANSWER 77 OF 154 HCAPLUS COPYRIGHT 2003 ACS

TI Novel Bacillus thuringiensis insecticidal crystal protein with a silent activity against coleopteran larvae
SO Applied and Environmental Microbiology (1992), 58(8), 2536-42
CODEN: AEMIDF; ISSN: 0099-2240
AU Lambert, Bart; Hofte, Herman; Annys, Katrien; Jansens, Stefan; Soetaert, Piet; Peferoen, Marnix
AN 1993:422971 HCAPLUS
DN 119:22971

L73 ANSWER 78 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Cloning and expression of the cryIVD gene of Bacillus thuringiensis subsp. israelensis in the cyanobacterium Agmenellum quadruplicatum PR-6 and its resulting larvicidal activity
SO Applied and Environmental Microbiology (1992), 58(5), 1650-5
CODEN: AEMIDF; ISSN: 0099-2240
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AN 1992:401972 HCAPLUS
DN 117:1972

L73 ANSWER 79 OF 154 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 21
TI Engineering for apple and walnut resistance to codling moth.
SO (1992) pp. 741-749. BRITISH CROP PROTECTION COUNCIL. FARNHAM (UK).
Meeting Info.: Brighton Crop Protection Conference: Pests and Diseases--1992. Brighton (UK). 23-26 Nov 1992.
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AN 93:101671 LIFESCI

L73 ANSWER 80 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Expression of the growth factor-inducible immediate early gene cyr61 correlates with chondrogenesis during mouse embryonic development
SO Cell Growth & Differentiation (1992), 3(9), 645-54
CODEN: CGDIE7; ISSN: 1044-9523
AU O'Brien, Timothy P.; Lau, Lester F.
AN 1993:646502 HCAPLUS
DN 119:246502

L73 ANSWER 81 OF 154 MEDLINE DUPLICATE 22
TI Genomic amplification and expression of delta-**endotoxin fragment** of **Bacillus thuringiensis**.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1992 Sep 16) 187 (2) 641-7.
Journal code: 0372516. ISSN: 0006-291X.
AU Roy P
AN 92412101 MEDLINE

L73 ANSWER 82 OF 154 MEDLINE DUPLICATE 23
TI Expression of a chimeric CaMV 35S Bacillus thuringiensis insecticidal protein gene in transgenic tobacco.
SO PLANT MOLECULAR BIOLOGY, (1992 Nov) 20 (3) 539-48.
Journal code: 9106343. ISSN: 0167-4412.
AU Carozzi N B; Warren G W; Desai N; Jayne S M; Lotstein R; Rice D A; Evola S; Koziel M G
AN 93043043 MEDLINE

L73 ANSWER 83 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)
TI EXPANSION OF INSECTICIDAL HOST RANGE OF BACILLUS-THURINGIENSIS BY INVIVO GENETIC-RECOMBINATION
SO BIO-TECHNOLOGY, (APR 1992) Vol. 10, No. 4, pp. 418-421.
ISSN: 0733-222X.
AU LERECLUS D (Reprint); VALLADE M; CHAUFAUX J; ARANTES O; RAMBAUD S
AN 92:318393 SCISEARCH

L73 ANSWER 84 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Expansion of insecticidal host range of Bacillus thuringiensis by in vivo genetic recombination.
SO BIO/TECHNOLOGY., (1992) vol. 10, no. 4, pp. 418-421.
AU Lereclus, D.; Vallade, M.; Chaufaux, J.; Arantes, O.; Rambaud, S.
AN 92:15421 LIFESCI

L73 ANSWER 85 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Expression of a hybrid gene for bifunctional insect toxin-glucuronidase protein in transgenic tobacco
SO Doklady Akademii Nauk (1992), 325(1), 183-6, 1 plate [Biochem.]
CODEN: DAKNEQ; ISSN: 0869-5652
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AN 1993:117706 HCAPLUS
DN 118:117706

L73 ANSWER 86 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Synthesis and toxicity of full-length and truncated bacterial CryIVD mosquitocidal proteins expressed in lepidopteran cells using a baculo virus vector;
Bacillus thuringiensis crystal protein gene expression in Spodoptera frugiperda cell culture and Trichoplusia ni larva for biological control agent development
SO J.Gen.Virol.; (1992) 73, Pt.1, 89-101
CODEN: JGVIAY
AU Pang Y; Frutos R; *Federici B A
AN 1992-02683 BIOTECHDS

L73 ANSWER 87 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Properties and analysis of insecticidal bacterial proteins produced in Lepidopteran cell cultures using baculo virus vectors;
Bacillus thuringiensis full-length, **truncated crystal protein** expression in Spodoptera frugiperda, Trichoplusia ni insect cell culture; insecticide and biological control agent (conference abstract)
SO In Vitro; (1992) 28, 3, Pt.2, 50A
CODEN: ITCSAF
AU Federici B A
AN 1992-06237 BIOTECHDS

L73 ANSWER 88 OF 154 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Heterologous expression of Bacillus thuringiensis var. tenebrionis toxin gene in Escherichia coli.
SO Biotecnologia Aplicada, (1992) Vol. 9, No. 1, pp. 31-37.
AU De La Riva, G. (1); Xoconostle-Cazares, B.; Gutierrez, C. (1); Moran, R. (1); Alvarez, A.; Herrera-Estrella, L.; Perez, S. (1)
AN 1993:73727 BIOSIS

L73 ANSWER 89 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI New functional Bacillus thuringiensis .delta.-endotoxin hybrid genes obtained by in vivo recombination
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
IN Galizzi, Alessandro; Albertini, Alessandra; Caramori, Tiziana; Degrassi, Giuliano; Persic, Lidija
AN 1991:402524 HCAPLUS
DN 115:2524

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9101087	A1	19910207	WO 1990-EP1145	19900712
W: AU, BR, JP, SU, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
AU 9061451	A1	19910222	AU 1990-61451	19900712

L73 ANSWER 90 OF 154 WPIDS (C) 2003 THOMSON DERWENT
TI Nucleic acid fragments encoding mutant 27 KD delta endotoxins - from Bacillus thuringiensis var. Israelensis, have improved insecticidal properties, part. against mosquitoes.
PI US 875 H 19910101 (199104)*
IN ELLAR, D J; WARD, E S

L73 ANSWER 91 OF 154 MEDLINE
TI Promoter function and structure of the growth factor-inducible immediate early gene cyr61.
SO NUCLEIC ACIDS RESEARCH, (1991 Jun 25) 19 (12) 3261-7.
Journal code: 0411011. ISSN: 0305-1048.
AU Latinkic B V; O'Brien T P; Lau L F
AN 91288203 MEDLINE

L73 ANSWER 92 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Identification of putative insect brush border membrane-binding molecules specific to Bacillus thuringiensis .delta.-endotoxin by protein blot analysis
SO Applied and Environmental Microbiology (1991), 57(10), 2816-20
CODEN: AEMIDF; ISSN: 0099-2240
AU Garczynski, Stephen F.; Crim, Joe W.; Adang, Michael J.
AN 1992:100844 HCAPLUS
DN 116:100844

L73 ANSWER 93 OF 154 MEDLINE DUPLICATE 24
TI The C-terminal domain of the toxic **fragment** of a **Bacillus thuringiensis crystal protein** determines receptor binding.
SO MOLECULAR MICROBIOLOGY, (1991 Nov) 5 (11) 2799-806.
Journal code: 8712028. ISSN: 0950-382X.
AU Honee G; Convents D; Van Rie J; Jansens S; Peferoen M; Visser B
AN 92140044 MEDLINE

L73 ANSWER 94 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)
TI THE C-TERMINAL DOMAIN OF THE TOXIC **FRAGMENT** OF A **BACILLUS-THURINGIENSIS CRYSTAL PROTEIN** DETERMINES RECEPTOR-BINDING
SO MOLECULAR MICROBIOLOGY, (1991) Vol. 5, No. 11, pp. 2799-2806.
AU HONEE G; CONVENTS D; VANRIE J; JANSENS S; PEFEROEN M; VISSER B (Reprint)
AN 91:662882 SCISEARCH

L73 ANSWER 95 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R) DUPLICATE 25
TI EFFECTS OF BIOMASS RANGE INTERACTIONS ON CATCHABILITY OF MIGRATORY DEMERSAL FISH BY MOBILE FISHERIES - AN EXAMPLE OF ATLANTIC COD (GADUS-MORHUA)
SO CANADIAN JOURNAL OF FISHERIES AND AQUATIC SCIENCES, (1991) Vol. 48, No. 5, pp. 843-848.
AU ROSE G A (Reprint); LEGGETT W C
AN 91:329058 SCISEARCH

L73 ANSWER 96 OF 154 MEDLINE DUPLICATE 26
TI Two structural domains as a general fold of the toxic fragment of the Bacillus thuringiensis delta-endotoxins.
SO EUROPEAN JOURNAL OF BIOCHEMISTRY, (1991 Feb 14) 195 (3) 631-5.
Journal code: 0107600. ISSN: 0014-2956.
AU Convents D; Cherlet M; Van Damme J; Lasters I; Lauwereys M
AN 91153300 MEDLINE

L73 ANSWER 97 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)
TI 2 STRUCTURAL DOMAINS AS A GENERAL FOLD OF THE TOXIC FRAGMENT OF THE BACILLUS-THURINGIENSIS DELTA-ENDOTOXINS
SO EUROPEAN JOURNAL OF BIOCHEMISTRY, (1991) Vol. 195, No. 3, pp. 631-635.

AU CONVENTS D (Reprint); CHERLET M; VANDAMME J; LASTERS I; LAUWEREYS M
AN 91:117385 SCISEARCH

L73 ANSWER 98 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Processing of delta endotoxin from Bacillus thuringiensis subspp. kurstaki HD-1 and HD-73 by immobilized trypsin and chymotrypsin
SO Applied Entomology and Zoology (1991), 26(4), 485-92
CODEN: APEZAW; ISSN: 0003-6862
AU Indrasith, Leslie S.; Ogiwara, Katsutoshi; Minami, Masayoshi; Iwasa, Tomoko; Maruyama, Takeshi; Suzuki, Nobukazu; Asano, Shoji; Sakanaka, Kazunobu; Hori, Hidetaka
AN 1992:146118 HCAPLUS
DN 116:146118

L73 ANSWER 99 OF 154 WPIDS (C) 2003 THOMSON DERWENT
TI Recombinant DNA encoding **bacillus thuringiensis** endotoxin - useful as insecticide against Lepidoptera, and **truncated** chimeric **endotoxin**-producing gene.
PI WO 9003434 A 19900405 (199017)*
RW: AT BE CH DE FR GB IT LU NL SE
W: AU JP US
AU 8944016 A 19900418 (199027)
JP 04500753 W 19920213 (199213) 15p
AU 635504 B 19930325 (199319) C12N015-32
EP 555201 A1 19930818 (199333) EN 50p C12N015-32
R: AT BE CH DE FR GB IT LI LU NL SE
US 5424409 A 19950613 (199529) 70p C12N015-00
IN ELY, S; TIPPETT, J M

L73 ANSWER 100 OF 154 MEDLINE DUPLICATE 27
TI Folding and unfolding of the protoxin from Bacillus thuringiensis: evidence that the toxic moiety is present in an active conformation.
SO BIOCHEMISTRY, (1990 Dec 11) 29 (49) 10971-7.
Journal code: 0370623. ISSN: 0006-2960.
AU Choma C T; Kaplan H
AN 91105025 MEDLINE

L73 ANSWER 101 OF 154 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 28
TI Nucleotide sequence and deduced amino acid sequence of a cryIA(c) gene variant from Bacillus thuringiensis .
SO NUCLEIC ACIDS RES., (1990) vol. 18, no. 18, p. 5546.
AU Dardenne, F.; Seurinck, J.; Lambert, B.; Peferoen, M.
AN 90:55462 LIFESCI

L73 ANSWER 102 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Expression of cyr61 , a growth factor-inducible immediate-early gene.
SO MOL. CELL. BIOL., (1990) vol. 10, no. 7, pp. 3569-3577.
AU O'Brien, T.P.; Yang, G.P.; Sanders, L.; Lau, L.F.
AN 90:21766 LIFESCI

L73 ANSWER 103 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Expression of Bacillus thuringiensis delta-endotoxin in transgenic plants of Nicotiana tabacum
SO Doklady Akademii Nauk SSSR (1990), 315(6), 1489-92 [Biochem.]
CODEN: DANKAS; ISSN: 0002-3264
AU Bogdarina, I. G.; Rukavtsova, E. B.; Shmatchenko, V. V.; Zinkevich, V. E.; Sever, I. S.; Aslanyan, E. M.; Isangalin, F. Sh.; Bur'yanov, Ya. I.; Baev, A. A.
AN 1991:241929 HCAPLUS
DN 114:241929

L73 ANSWER 104 OF 154 MEDLINE DUPLICATE 29
TI The Bacillus thuringiensis delta-endotoxin. Evidence for a two domain structure of the minimal toxic fragment.

SO JOURNAL OF BIOLOGICAL CHEMISTRY, (1990 Jan 25) 265 (3) 1369-75.
Journal code: 2985121R. ISSN: 0021-9258.
AU Convents D; Houssier C; Lasters I; Lauwereys M
AN 90110189 MEDLINE

L73 ANSWER 105 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Insect resistant cotton plants;
Bacillus thuringiensis var. kurstaki
truncated crystal protein gene cloning and
expression in transgenic plant; insect resistance; DNA sequence
SO Bio/Technology; (1990) 8, 10, 939-43
CODEN: BTCHDA
AU Perlak F J; Deaton R W; Armstrong T A; Fuchs R L; Sims S R; Greenplate J T
AN 1990-14748 BIOTECHDS

L73 ANSWER 106 OF 154 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 30
TI A translation fusion product of two different insecticidal crystal protein genes of Bacillus thuringiensis exhibits an enlarged insecticidal spectrum.
SO APPL. ENVIRON. MICROBIOL., (1990) vol. 56, no. 3, pp. 823-825.
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AN 90:22271 LIFESCI

L73 ANSWER 107 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Recombinant Bacillus thuringiensis crystal protein genes and their entomocidal host range;
crystal protein insecticide production; gene cloning, C-terminus deletion, and expression in Escherichia coli (conference abstract)
SO J.Cell.Biochem.; (1990) Suppl.14E, 341
CODEN: JCEBD5
AU Stiekema W; Visser B; Honee G; Vriezen W
AN 1990-14109 BIOTECHDS

L73 ANSWER 108 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Toxicity of protease-resistant domains from the delta-endotoxin of Bacillus thuringiensis subsp. israelensis in Culex quinquefasciatus and Aedes aegypti bioassays;
comparison of chymotrypsin-digested and undigested endotoxin
SO Appl.Environ.Microbiol.; (1990) 56, 1, 162-66
CODEN: AEMIDF
AU Pfannenstiel M A; Cray Jr W C; Couche G A; *Nickerson K W
AN 1990-02667 BIOTECHDS

L73 ANSWER 109 OF 154 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 31
TI Heterologous expression of a mutated toxin gene from Bacillus thuringiensis subsp. tenebrionis .
SO FEMS MICROBIOL. LETT., (1990) vol. 66, no. 1-3, pp. 95-100.
AU Rhim, S.-L.; Jahn, N.; Schnetter, W.; Geider, K.
AN 90:3002 LIFESCI

L73 ANSWER 110 OF 154 MEDLINE
TI Heterologous expression of a mutated toxin gene from Bacillus thuringiensis subsp. tenebrionis.
SO FEMS MICROBIOLOGY LETTERS, (1990 Jan 1) 54 (1-3) 95-9.
Journal code: 7705721. ISSN: 0378-1097.
AU Rhim S L; Jahn N; Schnetter W; Geider K
AN 90215176 MEDLINE

L73 ANSWER 111 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI New Bacillus thuringiensis isolates;
with insecticidal activity against Egyptian alfalfa weevil (Hypera brunneipennis)
AN 1989-14373 BIOTECHDS

PI US 4849217 18 Jul 1989

L73 ANSWER 112 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Transformation of plant cell with Bacillus thuringiensis DNA; biological control agent
AN 1989-05801 BIOTECHDS
PI WO 8901515 23 Feb 1989

L73 ANSWER 113 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Cloning of Bacillus thuringiensis toxin gene; for expression of crystal protein; biological control agent for beetles of the order Coleoptera
AN 1989-14987 BIOTECHDS
PI US 4853331 1 Aug 1989

L73 ANSWER 114 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Hybrid pesticide toxins; comprising **Bacillus thuringiensis** var. kurstaki **crystal protein fragment** linked to cytotoxic agent; DNA sequence; vector
AN 1990-01479 BIOTECHDS
PI EP 340948 8 Nov 1989

L73 ANSWER 115 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Preparation of pest-resistant transgenic plants
SO PCT Int. Appl., 56 pp.
CODEN: PIXXD2
IN Barton, Kenneth A.; Umbeck, Paul F.
AN 1990:153046 HCAPLUS
DN 112:153046

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8904868	A1	19890601	WO 1988-US4107	19881117
	W: AU, JP				
	RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE				
	AU 8928100	A1	19890614	AU 1989-28100	19881117
	CA 1337280	A1	19951010	CA 1988-583542	19881118

L73 ANSWER 116 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Method for improving the efficacy of insect toxins
SO Eur. Pat. Appl., 38 pp.
CODEN: EPXXDW
IN Fuchs, Roy Lee; Kishore, Ganesh Murthy; MacIntosh, Susan Caryl
AN 1990:193809 HCAPLUS
DN 112:193809

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 339009	A2	19891025	EP 1989-870047	19890410
	EP 339009	A3	19910116		
	EP 339009	B1	19930811		
	R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
	AU 8932580	A1	19891012	AU 1989-32580	19890410
	AU 620388	B2	19920220		
	CN 1037924	A	19891213	CN 1989-102063	19890410
	JP 02085204	A2	19900326	JP 1989-90531	19890410
	JP 07014845	B4	19950222		
	ZA 8902600	A	19900926	ZA 1989-2600	19890410
	AT 92717	E	19930815	AT 1989-870047	19890410
	ES 2058599	T3	19941101	ES 1989-870047	19890410
	US 5250515	A	19931005	US 1991-812890	19911220

L73 ANSWER 117 OF 154 WPIDS (C) 2003 THOMSON DERWENT
TI Microbial delivery system, esp. for delivery of nematocides - comprising treated non-proliferative microbial cells, contg. active protein produced

by homologous gene.
PI US 4861595 A 19890829 (198944)* 6p
IN BARNES, A C; EDWARDS, D L

L73 ANSWER 118 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Changes in microvilli and Golgi-associated membranes of lepidopteran cells induced by an insecticidally active bacterial .delta.-endotoxin
SO Journal of Cell Science (1989), 93(2), 337-47
CODEN: JNCSAI; ISSN: 0021-9533
AU Lane, Nancy J.; Harrison, J. B.; Lee, W. M.
AN 1989:473060 HCAPLUS
DN 111:73060

L73 ANSWER 119 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Cloning and expression of Bacillus thuringiensis insecticidal proteins in new hosts: applications for developing countries;
crystal protein truncated gene expression in tobacco transgenic plant for insect resistance, and in Synechocystis; biological control agent (conference paper)
SO Isr.J.Entomol.; (1989) 23, 185-88
CODEN: IJENB9
AU Peferoen M; Hoefte H; Chungjatupornchai W
AN 1991-07502 BIOTECHDS

L73 ANSWER 120 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 33
TI DELINEATION OF THE **TOXIN** CODING **FRAGMENTS** AND AN INSECT-SPECIFICITY REGION OF A DUAL TOXICITY **BACILLUS-THURINGIENSIS** CRYSTAL PROTEIN GENE
SO FEMS MICROBIOLOGY LETTERS, (1989) Vol. 58, No. 2-3, pp. 157-163.
AU HAIDER M Z; SMITH G P; ELLAR D J (Reprint)
AN 89:234247 SCISEARCH

L73 ANSWER 121 OF 154 MEDLINE
TI Delineation of the **toxin** coding **fragments** and an insect-specificity region of a dual toxicity **Bacillus thuringiensis** crystal protein gene.
SO FEMS MICROBIOLOGY LETTERS, (1989 Apr) 49 (2-3) 157-63.
Journal code: 7705721. ISSN: 0378-1097.
AU Haider M Z; Smith G P; Ellar D J
AN 89306530 MEDLINE

L73 ANSWER 122 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Facile preparation and characterization of the toxin from Bacillus thuringiensis var. kurstaki;
biological control agent crystal protein purification
SO Biochem.J.; (1989) 260, 1, 87-91
CODEN: BIJOAK
AU Bietlot H; Carey P R; Choma C; *Kaplan H; Lessard T; Pozsgay M
AN 1989-08242 BIOTECHDS

L73 ANSWER 123 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI New gene encoding delta-endotoxin of Bacillus thuringiensis;
expression of vector plasmid in Bacillus megaterium and Escherichia coli
AN 1989-01982 BIOTECHDS
PI WO 8808880 17 Nov 1988

L73 ANSWER 124 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI A cloned DNA **fragment** containing two **crystal protein** genes of **Bacillus thuringiensis**;
application as biological control agent (conference abstract)
SO Genome; (1988) 30, Suppl.1, 420
CODEN: GENOE3
AU Yong-Yan Bai; Ti Tang; Jian-Min Xie; Xiang-Ling Cao; Hang Wang

AN 1989-03305 BIOTECHDS

L73 ANSWER 125 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI The mosquito larvicidal activity of 130 kDa delta-endotoxin of Bacillus thuringiensis var. israelensis resides in the 72 kDa amino-terminal fragment
SO Biochemical and Biophysical Research Communications (1988), 153(1), 294-300
CODEN: BBRCA9; ISSN: 0006-291X
AU Pao-Intara, Manu; Angsuthanasombat, Chanan; Panyim, Sakol
AN 1988:450226 HCAPLUS
DN 109:50226

L73 ANSWER 126 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Toxic trypsin digest fragment from the Bacillus thuringiensis parasporal protein;
biological control agent
SO Appl.Environ.Microbiol.; (1987) 53, 2, 416-21
CODEN: AEMIDF
AU Aronson J N; Arvidson H C
AN 1987-04882 BIOTECHDS

L73 ANSWER 127 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Toxin-encoding DNA fragment;
producing Bacillus thuringiensis crystal protein peptide; an insecticide and production of recombinant biological control agent
AN 1986-05892 BIOTECHDS
PI WO 8601536 13 Mar 1986

L73 ANSWER 128 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI Cells containing intracellular pesticide polypeptide;
e.g. Bacillus thuringiensis crystal toxin gene expression in fungus or bacterium host
AN 1986-12023 BIOTECHDS
PI EP 192319 27 Aug 1986

L73 ANSWER 129 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
TI New DNA **fragment** encoding insecticide **crystal protein** from **Bacillus thuringiensis**;
plasmids for transformation of Escherichia coli
AN 1986-09580 BIOTECHDS
PI EP 186379 2 Jul 1986

L73 ANSWER 130 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Insertion of the Bacillus thuringiensis crystal protein gene into plant-colonizing microorganisms and their use
SO Eur. Pat. Appl., 42 pp.
CODEN: EPXXDW
IN Watrud, Lidia Sicari; Perlak, Frederick Joseph
AN 1986:621041 HCAPLUS
DN 105:221041

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 185005	A2	19860618	EP 1985-870174	19851209
	EP 185005	A3	19880511		
	EP 185005	B1	19920122		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	AU 8551008	A1	19860619	AU 1985-51008	19851209
	AU 588557	B2	19890921		
	JP 61141882	A2	19860628	JP 1985-276667	19851209
	JP 07004232	B4	19950125		
	ZA 8509400	A	19861029	ZA 1985-9400	19851209
	AT 71981	E	19920215	AT 1985-870174	19851209

L73 ANSWER 131 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Mode of action of bipyramidal .delta.-endotoxin of Bacillus thuringiensis subsp. kurstaki HD-1
SO Applied and Environmental Microbiology (1986), 51(3), 630-3
CODEN: AEMIDF; ISSN: 0099-2240
AU Tojo, Akihiko
AN 1986:143601 HCAPLUS
DN 104:143601

L73 ANSWER 132 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Effects of the three proteases from gut juice of the silkworm, Bombyx mori, on the two morphologically different inclusions of .delta.-endotoxin produced by Bacillus thuringiensis kurstaki HD-1 strain
SO Agricultural and Biological Chemistry (1986), 50(3), 575-80
CODEN: ABCHA6; ISSN: 0002-1369
AU Tojo, Akihiko; Samasanti, Wiwit; Yoshida, Norio; Aizawa, Keio
AN 1986:182300 HCAPLUS
DN 104:182300

L73 ANSWER 133 OF 154 MEDLINE DUPLICATE 36
TI Purification and characterization of the active **fragment** from **Bacillus thuringiensis** delta-**toxin**.
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1986 Nov 26) 141 (1) 106-11.
Journal code: 0372516. ISSN: 0006-291X.
AU Tyski S; Fujii Y; Lai C Y
AN 87100097 MEDLINE

L73 ANSWER 134 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)
TI PURIFICATION AND CHARACTERIZATION OF THE ACTIVE **FRAGMENT** FROM **BACILLUS-THURINGIENSIS** DELTA-**TOXIN**
SO BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1986) Vol. 141, No. 1, pp. 106-111.
AU TYSKI S; FUJII Y; LAI C Y (Reprint)
AN 86:694593 SCISEARCH

L73 ANSWER 135 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Mechanism of action of Bacillus thuringiensis insecticidal delta-endotoxin on insect cells in vitro.
SO AGRIC. BIOL. CHEM., (1985) vol. 49, no. 5, pp. 1461-1468.
AU Himeno, M.; Koyama, N.; Funato, T.; Komano, T.
AN 85:21849 LIFESCI

L73 ANSWER 136 OF 154 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 37
TI ELISA FOR THE TOXIC **FRAGMENT** OF BIPYRAMIDAL DELTA **ENDOTOXIN** PRODUCED BY **BACILLUS-THURINGIENSIS** -KURSTAKI STRAIN HD-1.
SO J SERIC SCI JPN, (1985) 54 (4), 304-309.
CODEN: NISZAQ. ISSN: 0037-2455.
AU TOJO A
AN 1986:111863 BIOSIS

L73 ANSWER 137 OF 154 MEDLINE DUPLICATE 38
TI Characterized full-length and **truncated** plasmid clones of the **crystal protein** of **Bacillus thuringiensis** subsp. kurstaki HD-73 and their toxicity to Manduca sexta.
SO GENE, (1985) 36 (3) 289-300.
Journal code: 7706761. ISSN: 0378-1119.
AU Adang M J; Staver M J; Rocheleau T A; Leighton J; Barker R F; Thompson D V
AN 86083171 MEDLINE

L73 ANSWER 138 OF 154 MEDLINE DUPLICATE 39

TI Nucleotide sequence coding for the insecticidal **fragment** of the **Bacillus thuringiensis crystal protein**

SO GENE, (1985) 34 (2-3) 243-51.
Journal code: 7706761. ISSN: 0378-1119.
AU Shibano Y; Yamagata A; Nakamura N; Iizuka T; Sugisaki H; Takanami M
AN 85232070 MEDLINE

L73 ANSWER 139 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)
TI NUCLEOTIDE-SEQUENCE CODING FOR THE INSECTICIDAL **FRAGMENT** OF THE **BACILLUS-THURINGIENSIS CRYSTAL PROTEIN**
SO GENE, (1985) Vol. 34, No. 2-3, pp. 243-251.
AU SHIBANO Y (Reprint); YAMAGATA A; NAKAMURA N; IIZUKA T; SUGISAKI H; TAKANAMI M
AN 85:305377 SCISEARCH

L73 ANSWER 140 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R)DUPLICATE 40
TI A TOXIC **FRAGMENT** FROM THE ENTOMOCIDAL **CRYSTAL PROTEIN** OF **BACILLUS-THURINGIENSIS**
SO AGRICULTURAL AND BIOLOGICAL CHEMISTRY, (1984) Vol. 48, No. 3, pp. 611-619.
AU NAGAMATSU Y (Reprint); ITAI Y; HATANAKA C; FUNATSU G; HAYASHI K
AN 84:195493 SCISEARCH

L73 ANSWER 141 OF 154 LIFESCI COPYRIGHT 2003 CSA DUPLICATE 41
TI A toxic **fragment** from the entomocidal **crystal protein** of **Bacillus thuringiensis** .
SO AGRIC. BIOL. CHEM., (1984) vol. 48, no. 3, pp. 611-619.
AU Nagamatsu, Y.; Itai, Y.; Hatanaka, C.; Funatsu, G.; Hayashi, K.
AN 84:18751 LIFESCI

L73 ANSWER 142 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI The effect of .delta.-endotoxin of Bacillus thuringiensis on the gut movements of the silkworm, Bombyx mori
SO Applied Entomology and Zoology (1984), 19(2), 221-6
CODEN: APEZAW; ISSN: 0003-6862
AU Hukuhara, Tosihiko; Midorikawa, Mari; Iwahana, Hidenori
AN 1984:524512 HCAPLUS
DN 101:124512

L73 ANSWER 143 OF 154 LIFESCI COPYRIGHT 2003 CSA
TI Novel biochemical avenues for enhancing Bacillus thuringiensis endotoxin potency against Spodoptera littoralis (Lep.: Noctuidae).
SO ENTOMOPHAGA., (1984) vol. 29, no. 2, pp. 171-178.
AU Salama, H.S.; Foda, M.S.; Sharaby, A.
AN 84:45972 LIFESCI

L73 ANSWER 144 OF 154 MEDLINE DUPLICATE 42
TI Diversity of locations for Bacillus thuringiensis crystal protein genes.
SO JOURNAL OF BACTERIOLOGY, (1983 Apr) 154 (1) 419-28.
Journal code: 2985120R. ISSN: 0021-9193.
AU Kronstad J W; Schnepf H E; Whiteley H R
AN 83160805 MEDLINE

L73 ANSWER 145 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Study on Bacillus thuringiensis toxic crystal. IV. Isolation and partial purification of an enzyme contained in the silkworm digestive juice solubilizing Bacillus thuringiensis toxic crystal
SO Nippon Sanshigaku Zasshi (1982), 51(4), 279-85
CODEN: NISZAQ; ISSN: 0037-2455
AU Seki, Takeyoshi; Abe, Kazunori; Tsutsui, Ryoki; Watanabe, Tadao
AN 1983:67812 HCAPLUS
DN 98:67812

L73 ANSWER 146 OF 154 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

DUPLICATE 43
TI EFFECT OF VISCOSITY ON PERCEIVED SWEETNESS INTENSITY OF SWEETENED SODIUM CARBOXYMETHYL CELLULOSE SOLUTIONS.
SO J TEXTURE STUD, (1981 (RECD 1982)) 12 (2), 259-274.
CODEN: JTXSBU. ISSN: 0022-4901.
AU IZUTSU T; TANEYA S; KIKUCHI E; SONE T
AN 1982:244540 BIOSIS

L73 ANSWER 147 OF 154 HCAPLUS COPYRIGHT 2003 ACS
TI Mode of action of Bacillus thuringiensis .delta.-endotoxin: histopathological changes in the silkworm midgut
SO Journal of Invertebrate Pathology (1980), 36(1), 90-103
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AU Endo, Yasuhisa; Nishiitsutsuji-Uwo, Junko
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DN 93:180617

L73 ANSWER 148 OF 154 HCAPLUS COPYRIGHT 2003 ACS
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CODEN: KNGZA2; ISSN: 0368-6264
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L73 ANSWER 152 OF 154 HCAPLUS COPYRIGHT 2003 ACS
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L73 ANSWER 153 OF 154 MEDLINE
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Journal code: 7503050. ISSN: 0021-8847.
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L73 ANSWER 154 OF 154 HCAPLUS COPYRIGHT 2003 ACS
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DN 28:2650
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PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 388091		19330223	GB	

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=> d ab 21,27,35,38,45,46,54,64,70,76,93,96,98,104,108,116,120,126,137,140

L73 ANSWER 21 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB Different Bacillus thuringiensis crystal protein CryIA(a) toxin regions were displayed on phagemid surfaces using the phage display vector phagemid pHEN1, to identify toxin sequences suitable for mutagenesis and selection. 4 Fragments corresponding to almost the entire activated toxin, the N-terminal domain, domain-II and the 2nd loop in domain-II were amplified by polymerase chain reaction and cloned in Escherichia coli DH5-alpha-F' as gene-III fusion proteins. CryIA(a) domain-II, in which the receptor-binding activity was located, was efficiently displayed and secreted as a soluble protein into the periplasm of Escherichia coli. The toxin fragments were expressed as glutathione-transferase (EC-2.5.1.18) fusion proteins from plasmid pGEX, and were purified and used to generate rabbit antisera. This method should be useful in modification of toxin specificity, and selection of toxin proteins with novel or expanded host ranges. (18 ref)

L73 ANSWER 27 OF 154 HCAPLUS COPYRIGHT 2003 ACS
AB Binding of different Bacillus thuringiensis insecticidal crystal proteins (ICPs) to the midgut epithelium of Spodoptera frugiperda larvae was characterized by binding expts. with midgut tissue sections and isolated brush border membrane vesicles. The results show that ICPs interact with the microvilli of epithelial cells of S. frugiperda in two different ways. The first is typical of highly toxic proteins (like CryIC and CryID); this interaction is saturable and specific. In contrast, some nontoxic proteins (like CryIAb) interact nonspecifically with the microvilli, since the binding of this toxin is not affected by the presence of high concns. of homologous competitor. The CryIC toxin binds to two brush border proteins of 40 and 44 kDa and the CryIAb toxin binds to a single protein of 150 kDa. Immunol. detection of ingested B. thuringiensis ICPs on gut sections of S. frugiperda larvae revealed that CryIC and CryID toxins bound along the epithelial brush border microvilli membrane. Binding of the nontoxic protein CryIAb was also obsd. in the epithelial brush border membrane of fed larvae, but it was extremely weak, implying that this type of interaction occurs also in vivo although it is not related to toxicity.

L73 ANSWER 35 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB The following are claimed: (1) Bacillus thuringiensis hybrid toxin (I) composed as its C-terminus, domain III of a 1st cry protein and as its N-terminus, the N-terminal region of a different cry protein; (2) hybrid toxins (Ia) composed of (I) and toxins at least 85% similar or (Ia) with similar insecticide activity or receptor binding properties; (3) pure proteins at least 90% identical to (I) and (Ia); (4) recombinant DNA sequences encoding either (I) or (Ia); (5) vectors containing (4); (6) plants or microorganisms able to express (4); (7) transgenic plants (or their progeny or seeds) containing (4); and (8) proteins produced by expression of (4). The recombinant DNA preferably contains nucleotides 1-1860 or 1-1881 of specified 3558 and 3579 bp DNA sequences. (I) may

also contain a protein with herbicide resistance, plant growth regulating, fungicide, antibiotic, virucide and/or nematocide activities. (I) may be modified to remove mRNA instability motifs or polyA sequences, and/or to insert organism-preferred codons. The new toxins an microorganisms transformed to produce them may be used as insecticides. (65pp)

L73 ANSWER 38 OF 154 HCAPLUS COPYRIGHT 2003 ACS
AB A new isolate of Bacillus thuringiensis serovar japonensis strain Buibui, which was specific to scarab beetles (M. Ohba et al., Lett. Appl. Microbiol. 14:54, 1992), was shown to have a 130 kDa insecticidal crystal protein (ICP) (H. Hori et al., J. Appl. Bacteriol. 76:307, 1994). ClaI restriction enzyme fragments of total cell DNA of the isolate were cloned into E. coli (Sato et al., Curr. Microbiol. 28:15, 1994). Whole 3480-bp nucleotide sequence of the gene encoding 130-kDa ICP was detd., and the mol. wt. of the ICP was estd. to be 130,424. The strongly conserved five blocks that occur in almost all ICP genes of B. thuringiensis were detected in the ORF with the same order and almost the same intervals as elsewhere. The amino acid sequence homologies of the whole ICP or N-terminus half portion to that of the CryIIIA, B, C, D, and CryV were about 35%.

L73 ANSWER 45 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB Cabbage (Brassica oleracea capitata) transgenic plants were constructed by Agrobacterium tumefaciens pGV2260-mediated **Bacillus thuringiensis** HD-2 **truncated crystal protein** crylA(B) and crylB gene transfer. A truncated crylB gene was cloned by polymerase chain reaction (PCR) and amplified DNA fragments were isolated and ligated into EcoRV-digested plasmid pBluescript SK. The 5' end of the gene was further introduced as a synthetic linker encoding the first 9 amino acids of the crylB gene. For recombinant expression in Escherichia coli, the mcrylB gene was fused to a beta-galactosidase (EC-3.2.1.23) reporter gene and the fusion protein was detected by immunoblotting. Plant transformation constructs were made by cloning the mcrylB gene in plasmid pBPF-omega-7. The expression cassettes were introduced into vector plasmid pDE1001 and plasmid pDK2. Single and combinatorial genetic constructions were called plasmid pDEK-B2, plasmid pDK-B3 and plasmid pDEK-B4. The 1.95 kb DNA fragment amplified from HD-2 DNA was identified as the 5' end of the crylB gene by Southern blot hybridization and sequencing. Such a method may be used for insect resistance. (2 ref)

L73 ANSWER 46 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB The following are claimed: (1) a method for controlling wireworms by contacting the wireworms with a wireworm-controlling amount of Bacillus thuringiensis PS211B2 (NRRL B-18921), **PS86A1** (NRRL B-18400) and PS80JJ1 (NRRL B-18679); (2) a specified DNA sequence (I) encoding a B. thuringiensis toxin active against wireworms, obtained from PS211B2, **PS86A1** and PS80JJ1; (3) a toxin encoded by (I); (4) a plant cell transformed by (I); and (4) a microbe transformed by (I). (I) comprises DNA from PS80JJ1 having a fragment selected from a HindIII fragment of 9.5 kb and an EcoRI fragment of 1.8 kb, which hybridizes with a 700-800 bp DNA sequence produced by polymerase chain amplification of PS80JJ1 DNA utilizing specified sequences as a forward primer. The B. thuringiensis strains or crystal proteins are useful for controlling wireworms which can cause damage to crops. Plants with disease-resistance to wireworms can be constructed using the polynucleotide encoding the toxin. (37pp)

L73 ANSWER 54 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB A protoplast transformation and regeneration system was developed for indica rice (Oryza sativa cv. IR43). Protoplasts were co-transformed with CaMV 35S promoter hph chimeric gene conferring resistance to hygromycin and gusA gene driven by either wheat (Triticum aestivum) rbcS or wheat cab promoter in separate plasmid constructs. Over 60% of

independent hygromycin selected callus clones were regenerated into plants. Southern analysis confirmed the stable integration of the gusA coding sequence into the plant genome. Histochemical analysis showed that the wheat cab promoter conferred strong cell type specific expression of the gusA reporter gene in transgenic rice plants. Such promoters should be useful for insect resistance studies (particularly against yellow stem borer) in rice. For such insect resistance studies, synthetic and **truncated** cryIA(c) **crystal protein** genes of **Bacillus thuringiensis** were introduced into protoplasts and several plants were obtained through selection. Expression of the cryIA(b) gene in transgenic rice either driven by the CaMV 35S promoter or by rbcS and cab promoters was presented. (0 ref)

L73 ANSWER 64 OF 154 MEDLINE DUPLICATE 17

AB Proteases with trypsin-, chymotrypsin- and thermolysin-like specificity were detected in Culex quinquefasciatus larval midguts. Their activities were monitored by N-terminal amino acid sequence analysis of the **Bacillus thuringiensis** subsp. israelensis CryIVD **toxin** proteolytic **fragments**. These proteases are located in the larval midgut and in different fractions obtained during the preparation of brush border membrane vesicles. The activity of the midgut proteases increased with an increase in pH. Both the chymotrypsin- and thermolysin-like activities are involved in the processing of solubilized CryIVD toxin, whereas an additional trypsin-like protease is necessary for the CryIVD parasporal inclusion processing. The solubilized CryIVD toxin was first cleaved between Thr347 and Phe348 and between Phe348 and Tyr349, generating a 40-kDa N-terminal fragment and a 32.5-kDa C-terminal fragment. The C-terminal domain was resistant to further processing, with only a small amount of a 31-kDa product appearing due to the action of a thermolysin-like protease. However, the N-terminal domain was very unstable, and was further degraded to about 30 kDa. Unlike the solubilized CryIVD toxin, the processing of the CryIVD parasporal inclusion was very slow at neutral pH. Three protease-resistant products were detected at pHs higher than 9.5 with an overnight incubation at 37 degrees C. The 30- and 28.5-kDa C-terminal peptides are proteolytic products of trypsin- and chymotrypsin-like proteases, respectively; while the 28-kDa N-terminal peptide has 27 amino acids deleted from the N-terminal end by a thermolysin-like protease.

L73 ANSWER 70 OF 154 MEDLINE DUPLICATE 20

AB Full-length and **truncated** forms of the **crystal protein** gene cryIA(b) derived from **Bacillus thuringiensis** subsp. kurstaki HD-1 and full-length cryIA(c) gene of B. thuringiensis subsp. kurstaki HD-73 were introduced into the genome of the baculovirus Autographa californica nuclear polyhedrosis virus, in place of the polyhedrin gene. All gene constructs were expressed at high levels in insect cells and insects upon infection with the recombinant viruses. The protein products were shown to be biologically and immunologically similar to the natural crystal protein. The expressed proteins formed crystals (in insects) up to 10 times bigger (in length) than their bacterial counterpart. The LT50 values for recombinant viruses were not significantly shorter than wild-type virus.

L73 ANSWER 76 OF 154 WPIDS (C) 2003 THOMSON DERWENT

AB AU 9062083 A UPAB: 19941216

A novel DNA **fragment** (I) encodes a **toxin** protein of a **Bacillus thuringiensis** (B.t) crystal protein peptide, where (I) comprises toxin-encoding DNA codans encoding a peptide having substantial amino acid (AA) homology with the peptide encoded by the amino-terminal 55-80% of a B.t. crystal protein gene.

Also claimed are: (1) transcriptional and translational prods. of (I); (2) a method for producing (I); (3) a plant transformed by a vector contg. (I); and (4) pure B.t. crystal protein toxin peptide.

USE/ADVANTAGE - The toxin-encoding segment of B.t. crystal protein gene is expressible in recombinant host organisms and is toxic to lepidopteran insects. Since the toxin peptide is approx. half the size of the B.t. crystal protein protoxin peptide, standard insecticidal prepns. contg. the protoxin crystals can be made to be twice as effective per given dose by utilising the smaller toxin fragment instead of the larger protoxin polypeptide.
Dwg.0/7
Dwg.0/7

L73 ANSWER 93 OF 154 MEDLINE DUPLICATE 24
AB The insecticidal crystal proteins of Bacillus thuringiensis show a high degree of specificity. In vitro binding studies with several crystal proteins demonstrated a correlation between toxicity and binding to receptors of larval midgut epithelial cells. In order to study the domain-function relationships of the toxic fragment, hybrid crystal proteins based on CryIA(b) and CryIC were constructed. Two out of 11 hybrid proteins constructed exhibited insecticidal activity. Both dispalyed an insecticidal spectrum similar to that of the parental crystal protein from which the C-terminal part of the toxic fragment originated. In addition, in vitro binding studies directly demonstrated the involvement of the C-terminal part of the toxic fragment in receptor binding. These results demonstrate that the C-terminal part of the toxic fragment determines specific receptor binding, which in turn determines, to a large extent, the insect specificity.

L73 ANSWER 96 OF 154 MEDLINE DUPLICATE 26
AB The unfolding by guanidine hydrochloride of the toxic **fragment** of a **Bacillus thuringiensis toxin** belonging to the CryIC class reveals a two-step denaturation under both acid and alkaline conditions. This demonstrates the existence of two structural domains as building blocks for this toxin. Protease digests performed on a CryIA(b) and CryIC B. thuringiensis toxin, under native and partially denatured conditions, confirm this conclusion. Whereas the native CryIC toxin is completely protease resistant, the CryIA(b) toxin, earlier described as consisting of two structural domains [Convents, D., Houssier, C., Lasters, I. & Lauwereys, M. (1990) J. Biol. Chem. 265, 1369-1375], is cleaved by three proteases, resulting in at least two common fragments. This suggests that this toxin is built up of two globular units linked by a protease-susceptible linker. The detection of a stable intermediate along the denaturation curve allows us to study and compare the consecutive unfolding of the structural domains for both toxins. By addition of a protease, under conditions where such an unfolding intermediate exists, a single denaturation phase can be assigned to a specific part of the protein. These experiments lead to the conclusion that the domain whose stability is highly dependent on pH corresponds to the N-terminal half of both toxins.

L73 ANSWER 98 OF 154 HCAPLUS COPYRIGHT 2003 ACS
AB Insecticidal crystal proteins (delta-endotoxins, ICPs) from Bacillus thuringiensis kurstaki HD-73 and HD-1 were digested by trypsin and chymotrypsin that were immobilized onto CNBr-Sepharose 4B. In a six-h digestion, both enzymes generated proteolytic resistant cores having 65 kDa mol. size from both ICPs. The ICP from HD-73 generated two other higher mol. intermediates, i.e. 95 and 80 kDa fragments, by the trypsin treatment. This suggested that the ICP of HD-73 might have three sites susceptible to trypsin. ICP from HD-1, however, was more quickly digested by both enzymes and the intermediate pattern in SDS-PAGE was completely different from that of the ICP from HD-73, suggesting that the main protein of ICP from HD-73, a product of cryIA(c) gene, contains significantly fewer HD-1 crystals. N-terminus amino acid residue of the resistant core derived from HD-73 was the same as the sequence starting from the 29th residue in the cryIA gene product, 130 kDa protein. The core generated by both enzymes from HD-1 and HD-73 showed insecticidal

activity against the diamondback moth, Pleutella xylostella, the smaller tea tortrix, Adoxophyes sp., and the common cutworm, Spodoptera litura.

L73 ANSWER 104 OF 154 MEDLINE DUPLICATE 29
AB The conformational characteristics of the minimal toxic **fragment** of the delta-**endotoxin** from **Bacillus thuringiensis** berliner 1715 were examined by fluorescence and circular dichroism spectroscopy. This insecticidal protein, specifically toxic to lepidopteran species, was found to consist of two structural domains. Experimental evidence for this conclusion was provided by biphasic guanidine hydrochloride unfolding curves at different pH values and electrophoretic patterns of protease digests. Two stable fragments of comparable molecular weight were obtained using four different broad specificity proteolytic enzymes. A secondary structure model was constructed using seven B. thuringiensis toxin sequences. These toxins were selected on the basis of their limited sequence homology and represent all known insecticidal specificities. Despite this divergence, a consensus secondary structure pattern was obtained, confirming the structural homology among the toxins. The N-terminal halves of all toxins are predicted to be relatively rich in alpha-helix structure and the C-terminal parts to contain alternating beta-strand and coil structures. The latter seems characteristic for a beta-sheet conformation. Comparing this model to the unfolding data obtained by circular dichroism, whose far UV signal gives a measure of the alpha-helix content, allowed us to delineate the structural domains into the primary structure.

L73 ANSWER 108 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB The toxicity and lectin-binding abilities of protease-resistant domains of the mosquitocidal delta-endotoxin from **Bacillus thuringiensis** subsp. israelensis were examined. The **endotoxin** was **digested** with chymotrypsin (EC-3.4.21.1) to yield protease-resistant domains. HPLC was used to separate the domains from smaller protease digestion products. Once purified, the domain no longer bound wheat germ agglutinin, which binds N-acetylglucosamine (GlcNAc) and GlcNAc oligomers. Digested toxin was as toxic as undigested toxin for Culex quinquefasciatus. Solubilized toxin at 62 ng/ml killed 50% of the larvae in 24 hr, while digested toxin required 79 ng/ml. However, the toxicity of chymotrypsin-digested endotoxin for Aedes aegypti was reduced 5-fold; 50% lethal concentrations for the larvae increased from 80 to 400 ng/ml. A model is presented in which GlcNAc-containing oligomers are required for toxicity for A. aegypti larvae but not C. quinquefasciatus larvae. B. thuringiensis and Bacillus sphaericus are the most important bacterial pathogens of mosquitoes. Extending the B. sphaericus host range to include A. aegypti mosquitoes is a possibility. (27 ref)

L73 ANSWER 116 OF 154 HCAPLUS COPYRIGHT 2003 ACS
AB The insecticidal efficacy of Bacillus thuringiensis toxin can be improved by co-administering an effective amt. of a trypsin inhibitor. Thus, the activity of B. thuringiensis kurstaki HD-73 toxin (0.5-20 .mu.g/mL) against tobacco budworm was potentiated from 1.5 to 8-fold by supplementing the toxin with soybean trypsin inhibitor [Kunitz (0.5-50 mg/mL); Bowman-Birk (0.15-7.5 mg/mL]. The potentiation of HD-73 depended on the source of trypsin inhibitor; soybean Kunitz increased the activity by 3.9-fold, as compared to 1.8-fold for trypsin inhibitor from cowpea.

L73 ANSWER 120 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R) DUPLICATE 33

L73 ANSWER 126 OF 154 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND ISI
AB Enzymatic digestion in vitro of the biological control agent Bacillus thuringiensis protoxin presumably releases and activates the toxin in a manner analogous to that which occurs when a B. thuringiensis sporulated fermentation preparation passes through the midgut of a lepidopteran larva. Therefore, a sporulated culture of B. thuringiensis subsp.

kurstaki (serotype 3a3b) HD-263 was treated with trypsin (EC-3.4.21.4) to release an activated toxin soluble in bicarbonate buffer. A 63-kDal protein, toxic to cabbage looper larvae (Trichoplusia ni) and to lepidopteran cells in culture, was purified to homogenicity from this trypsin digest. The larvicide, a glycoprotein containing 5% carbohydrate (wt/wt), was purified from the soluble B. thuringiensis trypsin digest by using ammonium sulfate precipitation. anion-exchange chromatography, and hydrophobic-interaction chromatography. Its amino acid composition was high in nonpolar residues and unusually low in lysine and histidine. Partial characterization of the toxin indicated that it corresponds well with reported sequences deduced from cloned genes. (33 ref)

L73 ANSWER 137 OF 154 MEDLINE DUPLICATE 38
AB Bacillus thuringiensis subsp. kurstaki HD-73 produces a crystal protein which is lethal to many lepidopteran larvae. The gene encoding this crystal protein has been isolated from a 75-kb plasmid and engineered into a recombinant Escherichia coli plasmid for analysis. The complete nucleotide sequences of the coding region and 387-bp 5' and 376-bp 3' to the coding region have been determined. The 3537-bp of the coding region specify a protein of Mr 133 330. The full-length gene and several 3' -truncated derivatives of the gene were examined in both E. coli and in an E. coli minicell-expression system to determine if the carboxy end of the protein is essential for toxicity. The results presented here provide the primary structure of the crystal protein gene and show that the N-terminal 68-kDal peptide is toxic, but at a lower level than the full-length gene product.

L73 ANSWER 140 OF 154 SCISEARCH COPYRIGHT 2003 ISI (R) DUPLICATE 40

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